

Horticulture Series No. 562

January 1986

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1985 STAKED TOMATO  
CULTIVAR EVALUATION

Robert J. Precheur, Gerald Myers, Ken DeWeese,  
Darin Puppel, Laura Birkman,  
Rhonda Garrabrant, and Pete Zoretic

Department of Horticulture  
The Ohio State University  
Ohio Agricultural Research & Development Center  
Columbus, Ohio

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1985 STAKED TOMATO  
CULTIVAR EVALUATION

Robert T. Proctor, Gerald Myers, Ken Doherty,  
Gordon R. Ruppel, Lesley B. Bittman,  
Richard S. Scharf, and Pete Tomack

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Department of Horticulture  
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Columbus, Ohio

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## 1985 STAKED TOMATO CULTIVAR EVALUATION

Gerald Myers, Ken DeWeese, Darin Puppel, Laura Birkman,  
Rhonda Garrabrant, and Pete Zoretic

Data Analysis and Report: Robert J. Precheur

Mailing Address: Department of Horticulture  
The Ohio State University  
2001 Fyffe Court  
Columbus 43210

This is a summary of our work evaluating several fresh  
market tomato cultivars.

Trial Design Twenty cultivars were grown in a randomized  
complete block design with 3 replications and 10 lines were  
evaluated in single observation, non-replicated plots.  
Spacing was 48 inches between rows and 18 inches between  
plants within rows. There were 15 plants per plot. Plants  
were pruned to the first cluster. Stakes were placed at two  
plant intervals and metal fence posts were positioned at the  
ends of each row.

Cultural Practices Seed was sown on March 1, 1985.  
Seedlings were transplanted to 2 1/4" cell paks on March 11,  
and moved outdoors to harden them off on May 6. The plants  
were planted in the field on May 14. One thousand pounds/A  
15-15-15 were broadcast and worked in after plowing. At  
field planting, each plant received 1/2 pint of 10-52-8  
starter solution mixed 3 pounds per 50 gallons of water.  
Sencor was applied post at 1.4 pound ai/A after the plants  
were well established. Irrigation was applied at the rate  
of 1 inch per week

Weather Data University Weather Station - Columbus

Month	Mean Temperature (F)			Precipitation Rain(inches)
	Max	Min	Avg	
May	75.2	49.4	62.3	4.97
June	77.3	53.7	65.5	1.76
July	82.4	57.7	70.0	3.31
August	81.4	60.0	70.7	2.91
Septem.	79.8	49.9	64.9	2.25

All publications of the Ohio Agricultural Research and  
Development Center are available to all on a  
nondiscriminatory basis without regard to race, color,  
national origin, sex, or religious affiliation.

Table Of Seed Sources:

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Table	
Code	
1. ac	Abbott & Cobb, Inc., Box 307, Feasterville, PA 19047
2. ag	Agri-Seed & Chemical, 850 Dryden Rd., Metamora, MI 48455
3. as	Asgrow Seed Co., P. O. Box 1039, Mechanicsburg, PA 17055-1039
4. fm	Ferry-Morse Seed Co., P.O. Box 100, Mountain View, CA 95037
5. h	Joseph Harris Co., Moreton Farm, 3670 Buffalo Rd., Rochester, N.Y. 14624
6. p	Peto Seed Co., Inc., Greenwood, SC 29647

Table 1. Yield, Grade, and Fruit Size of Tomato Cultivars, Columbus-1985

Early Harvest to July 31							Total Harvest to Sept. 10				
Cultivar	Seed Source	Marketable Yield (Tons/ Acre)		Percent by WT		Fruit Size (lb)	Marketable Yield (Tons/A)		Percent by WT		Fruit Size (lb)
		US #1	Total	US #1	Culls		US #1	Total	US #1	Culls	
Celebrity	p	0	.76	0	100	0.31	45.1	61.3	74	7	0.43
Taurus	ag	0.2	.79	21	79	0.34	41.2	62.9	66	0.08	0.34
Mountain											
Pride	ag	0	.93	0	61	0	39.8	53.2	75	0.06	0.38
Bingo	fm	0.1	2.03	2	79	0.71	37.3	57.9	64	12	0.49
Freedom	ac	0.6	2.13	28	78	0.46	35.1	51.1	69	12	0.46
PSX76680	p	0	.58	0	100	0	34.6	56.5	61	11	0.40
Jet Star	h	0.1	1.34	16	87	0.36	34.3	59.2	58	12	0.42
Independence	ac	1.3	3.72	35	61	0.44	33.3	49.9	67	13	0.37
Royal Flush	ag	0.6	1.75	34	63	0.44	32.7	48.0	63	9	0.45
President	p	1.2	2.78	43	54	0.5	31.9	48.9	65	13	0.47
Pik Red	h	0.6	1.90	32	64	0.46	31.1	45.1	69	12	0.47
Count Fleet	fm	0.2	1.25	16	84	0.69	30.7	52.1	59	11	0.45
Carmen	p	0.5	1.92	26	73	0.41	30.6	50.9	60	16	0.42
Vegas	fm	0.2	1.0	20	80	0.47	29.8	45.9	65	13	0.42
Red Express	ag	0.4	1.53	26	71	0.51	29.4	47.9	61	15	0.40
Revolution	ac	1.0	2.81	36	51	0.34	28.3	45.0	63	13	0.39
Duke	p	0.5	1.98	25	74	0.38	28.2	44.4	64	14	0.37
Liberty	ac	0.2	1.47	14	83	0.31	28.2	46.0	61	10	0.33
Jackpot	fm	1.8	4.22	43	54	0.44	24.2	42.4	57	17	0.59
Cavalier	p	2.2	3.75	59	39	0.49	22.7	40.1	57	22	0.43
LSD (0.05)		0.48					8.86				

See: "Seed Sources" for explanations of seed source codes.

Table 2. SINGLE OBSERVATION PLOTS: Yield, Grade, and Fruit Size of Tomato Cultivars, Columbus-1985

Early Harvest to July 31							Total Harvest to Sept. 10				
Cultivar	Seed Source	Marketable Yield (Tons/ Acre)		Percent by WT		Fruit Size (lb)	Marketable Yield (Tons/A)		Percent by WT		Fruit Size (lb)
		US #1	Total	US #1	Culls		US#1	Total	US #1	Culls	
Valerie	ag	0	.41	0	100	0.00	34.7	45.4	76	4	0.44
Coronado	c	0.3	1.07	24	76	0.51	35.2	50.1	70	10	0.33
FMX 68A	fw	0.5	1.29	40	54	0.40	36.3	49.0	74	7	0.38
XPH 5129	as	0.41	1.34	31	62	0.40	35.2	48.7	72	10	0.41
PSR 54682	p	0	0.33	0	100	0	42.2	62.9	67	12	0.46
XPH 5011	as	0.61	1.55	28	72	0.56	39.2	56.6	69	11	0.42
XPH 5029	as	0.52	13.20	4	96	0.48	35.0	51.0	69	9	0.46
XPH 5074	as	0	0.54	0	100	0	42.6	59.4	72	9	0.36
XPH 5031	as	1.31	4.21	31	60	0.38	32.0	47.7	67	15	0.43
Sunray	h	0	1.02	0	100	0	25.5	40.3	63	14	0.42

Table 3. Quality Ratings for Staked Tomato Cultivars, Columbus-1985

Cultivar	Seed Source	External Fruit Quality							Internal Fruit Quality			
		General Appear.	Green Shold	Conc. Crack.	Radial Crack.	Catface	Zipper	Deform. Fruit	Blot. Ripen.	Core	Color	Overall
Celebrity	ag	G	5	5	5	5	4.5	5	5	3.5	3.5	3.5
Taurus	c	F	4	5	5	4	5	4.5	4	2.5	5	4
Mountain												
Pride	ag	G	5	5	5	4	4	4.5	4.5	3	4.5	4
Bingo	fm	G	5	5	2.5	2.5	2.5	3	4	2.5	3.5	4
Freedom	ac	G	5	5	5	3.5	4.5	4.5	3.5	2	2	2.5
PSX76680	p	G	5	5	3.5	4	5	4	4.5	2	4.5	4.5
Jet Star	h	G	5	5	5	5	4.5	4	5	3.5	4.5	4
Independence	ac	G	4	5	5	4	3	4	4	4	4	4
Royal Flush	ag	G	5	5	5	3.5	3.5	4	4	2.5	4	4
President	p	G	4	5	5	3.5	3.5	2.5	4	4.5	5	5
Pik Red	h	F	4	5	5	4	4	4	4	2.5	3.5	3.5
Count Fleet	fm	F	5	5	5	4	3	3	5	3	3	3
Carmen	p	G	5	5	5	4	4	4	3.5	4.5	5	4.5
Vegas	fm	G	4	5	2.5	4	4	4	4	4	3	4
Red Express	ag	G	3	5	5	4.5	5	5	4	3.5	3.5	3.5
Revolution	ac	F	4	5	5	4	4.5	3.5	4	3.5	4	4
Duke	p	G	5	5	5	4	4	4.5	5	4	4.5	4.5
Liberty	ac	G	5	5	5	5	5	5	4.5	2.5	3	3
Jackpot	fm	G	5	5	4	3.5	2.5	3	4	4	5	4.5
Cavalier	p	F	-	5	5	4	4	3.5	4	3	3.5	3.5
Valerie	ag	G	5	5	5	5	5	5	5	3.5	5	4.5
Coranado	c	G	4	5	5	5	4	4.5	5	3	4.5	4
FMX 68A	fm	G	5	5	3.5	3	3	3	4	4	4.5	4.5
XPH 5129	as	F	4	5	5	4	4	4.5	3.5	3.5	3	3.5
PSR 54682	p	P	5	5	4	1	4	1	4	2	3	2
XPH 5011	as	F	5	5	5	4.5	4	4.5	4	3.5	4.5	3.5
XPH 5029	as	F	5	5	4.5	4	4.5	4	3.5	3	5	4.5
XPH 5074	as	GF	5	5	5	-	4	4.5	4	1.5	2.5	3
XPH 5031	as	G	3	5	5	4	4.5	4.5	4	3	3.5	3.5
Sunray	h	F	3	5	5	4.5	4.5	5	5	3.5	4.5	4

Seed Sources: see Table of Seed Sources for explanation of the seed source codes.

External Fruit Appearance & Disorders (from L to R): General Appearance, Concentric Cracking, Radial Cracking, Catfacing, Zippering, Deformed Fruit, Blothcy Ripening.

>>SCALE: 5 = Very Good, 1 = Poor.

Internal Fruit Ratings: Core: size and appearance at stem end.

>>SCALE: 5 = Very Good, 1 = Poor.

All ratings based on 1 harvest on Aug 14, 1985.

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